

REMARKS

This is a full and timely response to the Office Action mailed July 21, 2005.

By this Amendment, claims 1, 2 and 16 have been amended to more particularly define the present invention. Support for the claim amendments can be found variously throughout the specification and the original claims. Claims 1, 2 and 16-32 are pending in this application.

With regard to the amendment of the term “*alkyl aryl*” to “*arylalkyl*” in the specification and claims, Applicant notes that this amendment is effected to correct a typographical error. The term “*arylalkyl*” is fully supported by the disclosure of the PCT application (i.e. PCT/JP03/00359) upon which this 371 application is based.

In addition, one skilled in the art, based on the teachings of the specification, would clearly conclude that the term “*alkyl aryl*” is a typographical error and should be replaced with the term “*arylalkyl*”. Applicant wishes to direct the Examiner’s attention to page 10, line 3 from the bottom, to page 12, line 26, of the specification. In these paragraphs, “*arylalkyl*” is clearly an example of substituents R¹, R², R³ and R⁴.

The specification states, in the last two lines of page 10, that R¹ denotes a hydrogen atom, an alkyl group, or an aryl or alkyl aryl that may have at least one substituent. Then, specific examples of each substituent are described. Preferable examples of the alkyl group, including the names of specific groups, are disclosed from the last line on page 10 to line 4 on page 11 of the specification. A listing of specific examples of the aryl group is next disclosed on page 11, lines 4-9, of the specification. This is then followed by the disclosure (see on page 11, lines 9-12, of the specification) that when R¹ is an arylalkyl group, it includes benzyl group, 1-phenylethyl group, 2-phenylethyl group, . . . 5-phenylbutyl group, etc. Since no further explanation about R¹ is provided in these paragraphs, and since all the enumerated groups fall within the arylalkyl group, one skilled in the art will clearly conclude that the term “*alkyl aryl*” is a typographical error and should be replaced with the term “*arylalkyl*”.

Likewise, in the next paragraphs discussing substituent R² in formula (1) and substituents R¹, R³ and R⁴ in formula (2), no “*alkyl aryl*” are disclosed (see page 11, line 15, to on page 12, line 26, of the specification). Instead, it is disclosed in these paragraphs that substituent R² in formula (1) and substituents R¹, R³ and R⁴ in formula (2) is an alkyl group, an aryl group, or an arylalkyl group.

Thus, for these reasons, Applicant submits that no new matter has been added to the disclosure of the present application.

In view of this Amendment, Applicants believe that all pending claims are in condition for allowance. Reexamination and reconsideration in light of the above amendments and the following remarks are respectfully requested.

Rejections under 35 U.S.C. §102

Claims 1 and 2 are rejected under 35 U.S.C. §102(b) as allegedly being anticipated by JP 04-224579. Applicant respectfully traverses this rejection.

To constitute anticipation of the claimed invention, the cited reference must disclose each and every limitation of the claims. Here, in this case, JP 04-224579 fails to teach or suggest the specific compounds defined in amended claims 1 and 2.

With regard to claim 1, Applicant has amended claim 1 to distinguish the luminescent compounds defined in amended claim 1 from the compounds disclosed in JP 04-224579. Applicant notes that JP 04-224579 merely teaches methyl and ethyl groups as specific examples of the alkyl portion of the N-alkylindoline ring (see paragraph [0008] of JP 04-224579). Furthermore, JP 04-224579 only teaches these compounds as a red pigment. In other words, JP 04-224579 does not at all teach or suggests luminescent compounds which emit white light upon the application of electromagnetic energy. In contrast, the luminescent compounds defined in amended claim 1 emits white light by itself upon the application of electromagnetic energy as confirmed by the experimental data included in Examples 1, 3-8, and 16.

With regard to claim 2, Applicant has amended claim 2 to exclude “*a hydrogen atom*” from the definition of substituents R³ and R⁴. Such an amendment specifically excludes from the claim the relevant compound disclosed in JP 04-224579.

Thus, for these reasons, withdrawal of this rejection is respectfully requested.

Claims 1 and 16-24 are rejected under 35 U.S.C. §102(b) as allegedly being anticipated by JP 11-087059. Applicant respectfully traverses this rejection.

Applicant has amended claims 1 and 16 to distinguish the luminescent compounds defined in these claims from the compounds disclosed in JP 11-087059. In addition, JP 11-087059 only teaches that its element emits green light when a voltage of 12V was applied to the element (see paragraph [0069] of JP 11-087059). Furthermore, all of the elements prepared in

the Examples (except for Example 17) of JP 11-087059 emit green light. It should be noted that the element prepared in Example 17 uses compound 25, which is 5,12-di(4'-methylphenyl)-3:4, 10:11-dibenzoquinacridone. Even Example 19 utilizes a mixture of (A) 1,1,4,4-tetraphenyl-1,3-butadiene as a blue light-emitting component, (B) compound 12, which is 5,12-di-n-pentyl-3,10-diphenyl-1:2, 8:9-dibenzoquinacridone, as a green light-emitting component, and (C) DCM1, which is 4-(dicyanomethylene)-2-methyl-6-(4'-dimethylaminostyryl)-4H-pyran, as an orange light-emitting component, to make the element emit white light.

In contrast, the present invention provides a luminescent compound which emits white light **by itself**. The compounds prepared in the Examples of the specification were not mixed with any other compounds to emit white light (see Examples, 1, 3-8 and 16 of the specification).

Thus, for these reasons, withdrawal of this rejection is respectfully requested.

Objection to the Claims


Claims 25-32 are objected to as being dependent upon a rejected base claim. This objection has been rendered moot in view of the foregoing claim amendments and arguments since the base claims are now allowable in view of such claim amendments and arguments.

CONCLUSION

For the foregoing reasons, all the claims now pending in the present application are believed to be clearly patentable over the outstanding rejections. Accordingly, favorable reconsideration of the claims in light of the above remarks is courteously solicited. If the Examiner has any comments or suggestions that could place this application in even better form, the Examiner is requested to telephone the undersigned attorney at the below-listed number.

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